THE BASIS OF MY FORECASTING METHOD

by W. D. Gann
(course on the "Gann angles," 1935)

WALL STREET STOCK SELECTOR
NEW STOCK TREND DETECTOR
HOW TO MAKE PROFITS IN COMMODITIES

ROYAL ECONOMIC SOCIETY

W. D. GANN
82 WALL STREET
NEW YORK 5, N. Y.

THE BASIS OF MY FORECASTING METHOD

Mathematics is the only exact science. All power under heaven and on earth is given unto the man who masters the simple science of mathematics. Emerson said: "God does indeed geometrize." Another wise man said: "There is nothing in the universe but mathematical points." Pythagoras, one of the greatest mathematicians that ever lived, after experimenting with numbers and finding the proofs of all natural laws, said: "Before God was numbers." He believed that the vibration of numbers created God and the Diety. It has been said, "Figures don't lie." Men have been convinced that numbers tell the truth and that all problems can be solved by them. The chemist, engineer, astronomer would be lost without the science of mathematics.

It is so simple and easy to solve problems and get correct answers and results with figures that it seems strange so few people rely on them to forecast the future of business, stocks and commodity markets. The basic principles are easy to learn and understand. No matter whether you use geometry, trigonometry, or calculus, you use the simple rules of arithmetic. You do only two things: You increase or decrease.

There are two kinds of numbers, odd and even. We add numbers together, which is increasing. We multiply, which is a shorter way to increase. We subtract, which decreases, and we divide, which also decreases. With the use of higher mathematics, we find a quicker and easier way to divide, subtract, add and multiply, yet very simple when you understand it.

Everything in nature is male and female, white and black, harmony or inharmony, right and left. The market moves only two ways, up and down. There are three dimensions which we know how to prove--width, length and height. We use three figures in geometry--the circle, the square, and the triangle. We get the square and triangle points of a circle to determine points of time, price and space resistance. We use the circle of 360 degrees to measure Time and Price.

There are three kinds of angles--the vertical, the horizontal, and the diagonal, which we use for measuring time and price movements. We use the square of odd and even numbers to get not only the proof of market movements, but the cause.

HOW TO MAKE CHARTS

Charts are records of past market movements. The future is but a repetition of the past. There is nothing new. As the Bible says--"The thing that hath been, it is that which shall be." History repeats and with charts and rules we determine when and how it is going to repeat. Therefore, the first and most important point to learn is how to make charts correctly because if you make an error in the chart, you will make an error in applying the rules to your trading.

YEARLY CHART: You should keep a yearly high and low chart, that is, recording the extreme low and the extreme high price made during the calendar year on one line. The spacing for the price can be used one point to each 1/8 inch or two points or more, according to the activity and range of the stock.

MONTHLY CHART: You must always keep up a monthly high and low chart, which is the most important chart of all in determining the main trend. This chart records the extreme high and extreme low price for the calendar month on one line, and each space or 1/8 inch on the cross-section chart paper should represent one point or $1 per share.

WEEKLY CHART: The next and one of the very important charts to keep is a weekly high and low chart. Where stocks are selling below 50, it usually pays to make this chart up using each 1/8 inch to represent one-half point, or two spaces to represent one full point, or four points for each one-inch space. When stocks become very active, especially when they are selling above $100 per share, then you can make up the weekly chart using each space or 1/8 inch on the chart paper to represent one point or $1 per share.

SEMI-WEEKLY OR 3-DAY CHART: The next chart of importance to the Weekly Chart is a 3-day chart, that is, taking the extreme high and extreme low price made from the opening of the market on Monday morning until the close on Wednesday night, closing the chart on Wednesday night- then from the opening on Thursday to the close on Saturday, taking the extreme high and low and closing the chart on Saturday. This gives you a time period showing one-half of the week. This chart is very important as will be explained later on in the instructions. The spacing for this chart can be the same as for the weekly high and low chart.

WEEKLY MOVING-AVERAGE OR MEAN POINT: To get a Weekly Moving-Average, we take the extreme low for the week and the extreme high for the week and divide by 2, getting the half-way or mean point for the week. This can be recorded on the weekly high and low chart or on a separate chart, recording the Weekly Moving-Average with a dot and using one line on the chart for each week. Importance of this Weekly Mean Point will be explained late

DAILY CHART: When you are trading in a stock that is active, you should always keep up a daily high and low chart, but for study purposes it is enough to keep up the Weekly and Monthly Charts, which give you the main trend. The Daily Chart shows the minor trend and shows a change in trend much oftener than any of the other charts, but the indication does not last as long or run so far. This chart should be kept up the same as the others, except when stocks are selling below 50 or when they are in an inactive trading range- then the spacing should be 1/2-point to each 1/8-inch on the chart paper, allowing two spaces to represent one full point or $1 per share. When stocks are active and advancing very fast, making a wide range each day, then you can make the Daily Chart the same as the Weekly or Monthly, that is, using one point for each 1/8-inch on the chart paper. This spacing cuts the chart down and keeps it in a range where it is easy to see and read when fluctuations are wide.

No spaces are skipped on the Daily Chart for holidays or Sundays, therefore the time period is for actual market days and not calendar days. However, you should carry the calendar days along at least every two weeks, as later, under rules for Time Periods for change in trend, you will find that it is necessary to check up and know when the stock is 30, 60, 80, 120, 135, etc. days from a top

or a bottom, which means calendar days, the exact measurement of Time for the daily chart. Often the Daily Chart on actual daily movements comes out on an exact mathematical angle of time measurement at the same time the calendar days come out on exact time measurement, making it a doubly important point for change in trend.

GEOMETRICAL ANGLES

After long years of practical experience, I have discovered that Geometrical Angles measure accurately Space, Time, Volume and Price.

Mathematics is the only exact science, as I have said before. Every nation on the face of the earth agrees that 2 and 2 make 4, no matter what language it speaks. Yet all other sciences are not in accord as mathematical science. We find different men in different professions along scientific lines disagreeing on problems, but there can be no disagreement in mathematical calculation.

There are 360 degrees in a circle, no matter how large or how small the circle may be. Certain numbers of these degrees and angles are of vast importance and indicate when important tops and bottoms occur on stocks, as well as denote important Resistance Levels. When once you have thoroughly mastered the Geometrical Angles, you will be able to solve any problem and determine the trend of any stock.

After 35 years of research, tests and practical applications, I have perfected and proved the most important angles to be used in determining the trend of the stock market. Therefore, concentrate on these angles until you thoroughly understand them. Study and experiment with each rule I give you, and you will make a success.

We use geometrical angles to measure Space and Time periods because it is a shorter and quicker method than addition or multiplication, provided you follow the rules and draw the angles or lines accurately from tops and bottoms or extreme highs and lows. You may make a mistake in addition or multiplication, but the geometrical angles accurately drawn will correct this mistake. For example: If you should count across the bottom of your chart 120 spaces, which represents 120 days, weeks, or months, then you begin at "0" and number vertically on your chart up to 120- then from this top point at 120 draw a 45-degree angle moving down, this will come out at "0" on 120 points over from the beginning. If you have made a mistake in numbering, this will correct it.

Angles drawn on a chart always keep before you the position of the stock and its trend whereas if you had a resistance point on time written down, you might mislay it or forget it but these angles are always on the chart in front of you.

These angles or moving-average trend lines correctly drawn will keep you from making mistakes or misjudging the trend. If you wait and follow your rules, these angles will show you when the trend changes.

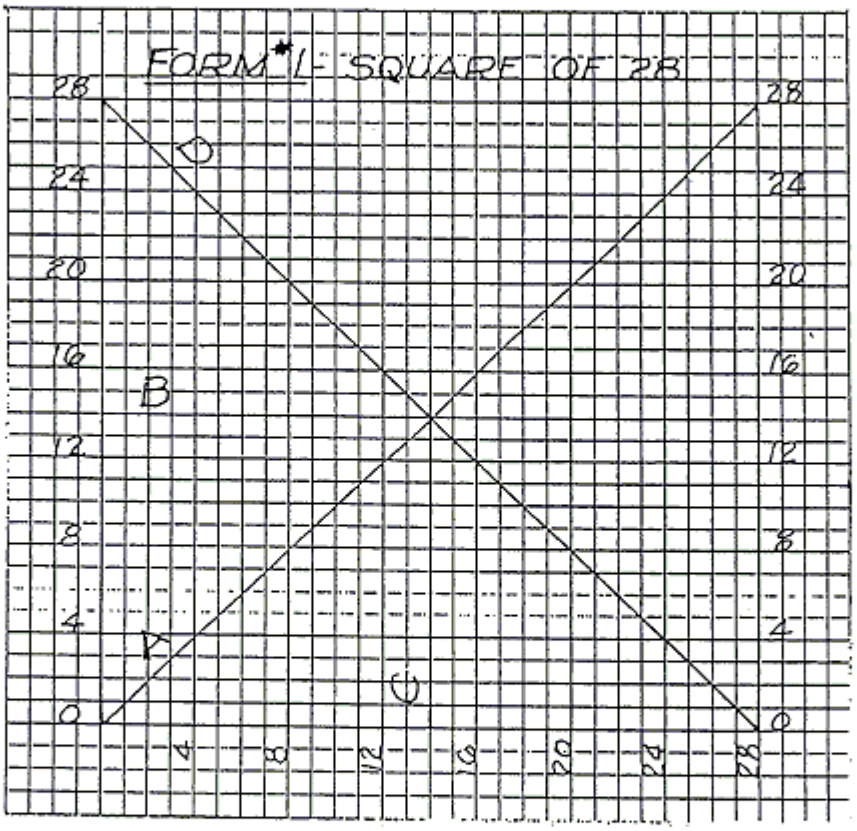
The moving-average as commonly used is obtained by taking the extreme low price and the extreme high price of the calendar day, week or month, and dividing it by two to get the mean or average price for the day, week or month, and continuing this at the end of each time period. This is an irregular movement in spaces or points per week because at one time it may move up 2 points per week

and at another 5 points per week, while the time period is a regular unit. Therefore geometrical angles, which are really moving-averages, move up or down at an uniform rate from any bottom or top on a daily, weekly or monthly chart.

HOW TO DRAW GEOMETRICAL ANGLES

There are three important points that we can prove with mathematics or geometry: the Circle, the Square, and the Triangle. After I have made the Square I can draw a Circle in it using the same diameter, and thereby produce the Triangle, the Square and the Circle.

The Angles or moving-trend-line averages measure and divide Time and Price into proportionate parts. Refer to Form "1", where I have drawn the square of 28. You will note that this is 28 high and 28 wide- in other words, 28 up and 28 across. It is the same as a square room which has a bottom or floor, a top or ceiling, and side walls. Everything has width, length, and height.



To get the strongest and most important points in this Square, I divide it into two equal parts by drawing a horizontal and a vertical line. Note angle marked "A" which divides each of the smaller squares into two equal parts and runs from "0" to "28" diagonally. This is a diagonal line moving on a 45° angle and divides the large Square into two equal parts. Then note angle "B" at "14" running horizontally across. This divides the Square into two equal parts. Note angle "C", which is a vertical line, running up from "14", which is one-half of "28". This crosses at the center or half-way point at 14, where the other angles cross, dividing the Square into two equal parts. Then note angle "D", which forms another 45° angle moving from the N. W. corner to the S. E. corner, crossing "14" at the exact half-way point. You see by this that if we draw the first line thru the center of the square, we divide it into two equal parts- then when

we draw lines from the other directions, we divide it into four equal parts- then by drawing the two lines from each corner, we divide the square into 8 equal parts and produce 8 triangles.

As you look at this Square, it should be easy for you to tell with your eye where the strongest support point is or resistance point is. It is at the center where all the angles cross. Four angles cross at this point, so naturally this would be a stronger support point than a place where only one angle crosses. I could divide each one of these smaller squares into four or eight equal parts by drawing angles in the same way. Later, when I give you the rules and examples, I will explain how to square the Range of a stock, that is, the difference between the extreme low and the extreme high prices, or the difference between any low point and any high point, and also how to square the bottom price. For example: If the top of a stock is 28, this Square of 28 x 28 would represent squaring the Price by Time, because if we have 28 points up in Price, and we move over 28 spaces in Time, we square the Price with Time. Therefore, when the stock has moved over 28 days, 28 weeks, or 28 months, it will be squaring its price range of 28.

PATTERN CHART FOR GEOMETRICAL ANGLES

The Square of 90, or the Pattern Chart, shows all the measured angles that are important to use in determining the position of a stock. These angles are as follows: 3⅛, 7½, 15, 18⅞, 26¼, 30, 33⅞, 37½, 45, 52½, 56¼, 60, 63⅞, 71¼, 75, 82½, 86¼, and 90 degrees.

It is not necessary to measure these angles with a protractor. All you have to do to get the angles correct is to count the spaces on the chart paper, using 8 x 8 to the inch, and draw the lines or angles accordingly.

On the square of 90, which you will receive with these instructions, note how equal angles drawn from the top and from the bottom prove themselves by the point at which they cross. For example:

The angle of 8 x 1 drawn from "0" and the angle of 8 x 1 drawn from "90" down both cross at 45, 5-5/8 points over from "0" counting to the right. Then, the angle of 4 x 1 from "0" and the angle of 4 x 1 down from "90", you will notice, cross at 11¼ on 45, equidistant from the other angle and twice the measure. The reason why these angles prove this way is because the 45° angle or 45 points or degrees from "0" to 45 is one-half of 90 Therefore, parallel angles beginning at "0" going up and at 90 coming down, must cross on a 45° angle or at the gravity center.

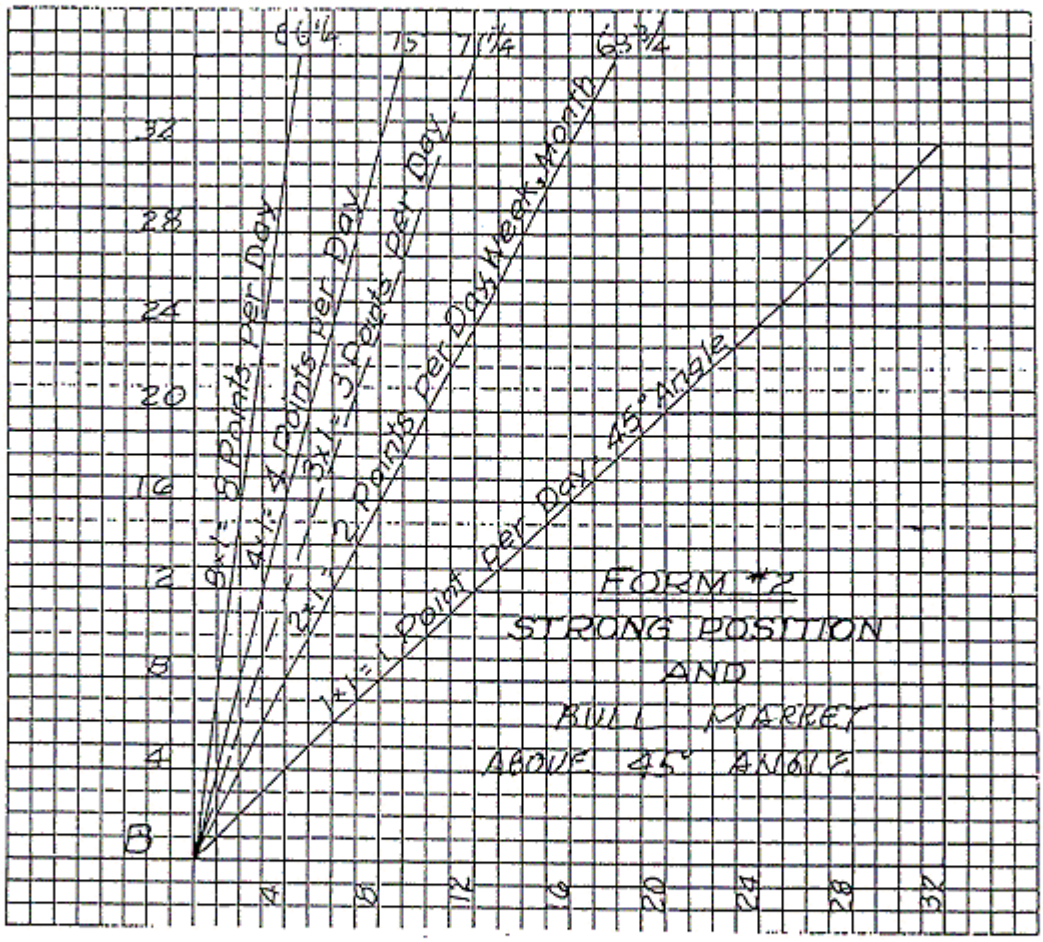
HOW TO DRAW ANGLES FROM A LOW POINT RECORDED BY A STOCK

An example marked "Form 2" shows you the most important angles to use when a stock is working higher and advancing. (See page 6)

FIRST IMPORTANT GEOMETRICAL ANGLE: 45° or 1 x 1 The first and always most important angle to draw is a 45-degree angle or a moving-average that moves up one point per day, one point per week or one point per month. This is a 45° angle because it divides the Space and Time Periods into two equal parts As long as the market or a stock stays above the 45° angle, it is in a strong position and indicates higher prices. You can buy every time a stock rests on the 45° angle with a stop loss order one, two or three points under the 45° angle, but remember the rule— never use a stop

loss order more than 3 points away. Unless stocks are near the low levels or just starting in a bull market or selling at very low prices, I always use a stop loss order one point under the 45° angle. If this angle is broken by one point, you will usually find that the trend has changed at least temporarily and the stock will go lower.

An easy way to calculate accurately how to put on this 45° angle is: For example: If the time is 28 days, 28 weeks, or 28 months from the point where the stock was bottom, then the angle of 45° must be 28 points up from the bottom and would cross at 28. This is one of the easiest angles to put on and one of the simplest to learn. You can beat the market by trading against the 45° angle alone if you stick to the rule-- wait to buy a stock on the 45° angle or wait to sell it against the 45° angle.



NEXT IMPORTANT ANGLE
2 x 1

is the angle of 2 x 1, or the moving-average which moves up at the rate of 2 points per day, week or month. It divides the space between the 45-degree angle and the vertical angle into two equal parts and measures 63$\frac{6}{4}$° That is why it is the next strongest and most important angle. As long as a stock holds above this angle, it is in a stronger position than when it is resting on a 45° angle because it is a more acute angle. When a stock breaks under this angle of 2 x 1, or two points for each time period, then it indicates that it will go lower and reach the 45° angle. Remember the rule of all angles: No matter what angle the stock breaks under, it indicates a decline to the next angle below it.

THIRD IMPORTANT ANGLE, 4 x 1 which is still stronger as long as a stock holds above it, is the angle which moves up 4 points per day, week, or month. This angle is 4 x 1, or 4 points of Space equal one period of Time. It measures 75° and divides the space between the angle of 2 x 1 and the 90° angle into two equal parts. Any stock that continues to advance 4 points per day, 4 points per week, or 4 points per month, and remains above this angle is in a very strong position as long as it stays above it, but when it breaks under, it indicates the next angle or next support point according to the position of the stock on Time.

FOURTH IMPORTANT ANGLE 8 x 1 is the angle of 8 x 1 or the one that moves up 8 points per day, week or month. This angle measures 82½°. As long as a stock can hold above this angle on daily, weekly or monthly chart, it is in the strongest possible position, but when it reverses trend and declines below this angle, then it indicates a decline to the next angle.

NEXT ANGLE: 16 x 1 It is possible to use an angle of 16 x 1, or 16 points of Price to one period of Time, which measures 86¼°, but this angle is only used in fast, advancing markets, like 1929, when stocks are moving up or down 16 points or more per week or per month. There are very few stocks that will move up 16 points per day, week or month, and very seldom.

You will note that with these four important angles we show the strong or bullish side of the market. All the time by dividing the Space with angles we are getting the half-way point or the gravity center of Time and Price.

3 x 1 ANGLE: Note the angle drawn in Green, marked "3 x 1", which moves up at the rate of 3 points per day, week or month, measuring 71¼°. This angle is important at times after markets have had a prolonged advance and are a long distance up from the bottom. It is an important angle to use on Monthly and Weekly charts.

These are all the angles you need as long as a stock continues to advance and work up and stays above the angle of 45° or the moving-average of one point per day, week or month.

While there are 360 degrees in a circle and angles can form at any of these degrees, all of the important angles form between "0" and "90" because 90 is straight up and down and the most acute angle on which a stock can rise. For example: The 45° angle divides the space from "0" to "90" in half. The angle of 135° is simply another angle of 45° because it is one-half of the next quadrant between 90 and 180. 225 and 315 in a circle are also 45° angles. Therefore all of the angles valuable in determining the trend of a stock are found between "0" and "90" degrees. When we divide 90° by 8 we get the most important angles to use- then divide it by 3 we get 30 and 60° angles, which are important to use for Time and Resistance Points.

WHAT KIND OF BOTTOMS TO DRAW ANGLES OR MOVING-AVERAGE LINES FROM

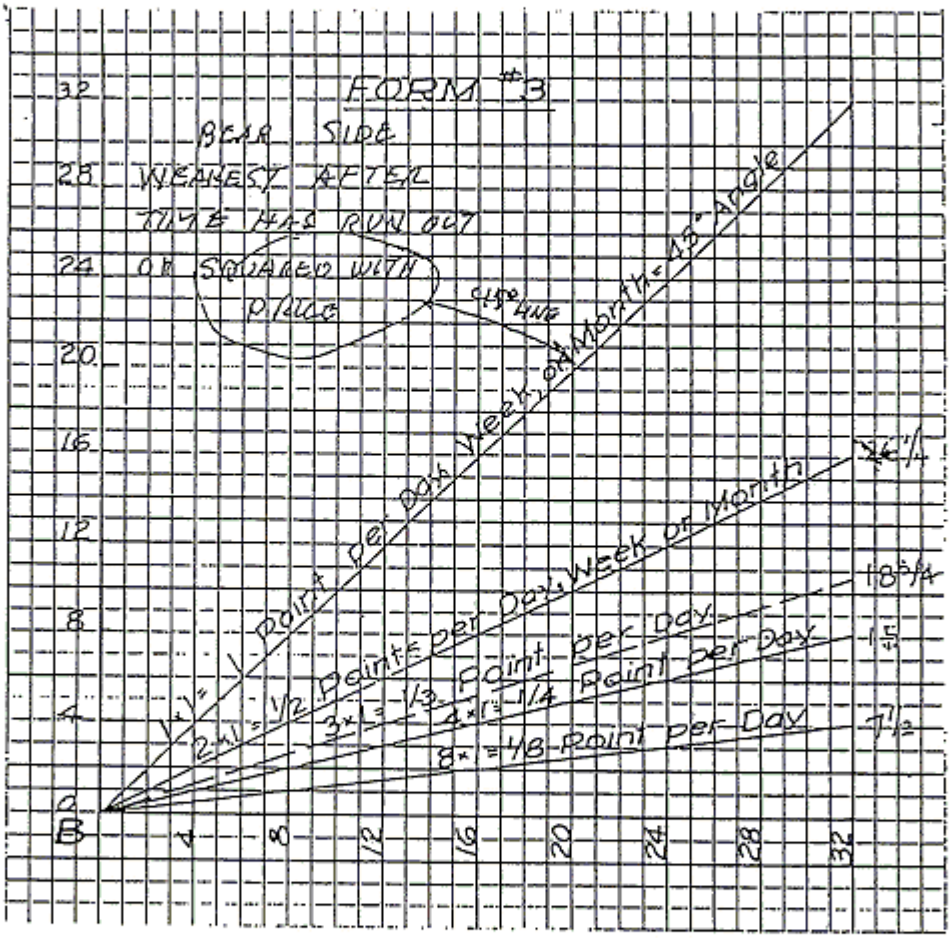
DAILY CHART: If a stock has been declining for some time- then starts to rally (by rallying from a bottom it must make higher bottoms every day and higher tops)- then after a 3-day rally on the daily high and low chart, you can put on the 45° angle and the angle of 2 x 1 from the bottom or low point. As a rule, it will only be necessary to put on these two angles at first. If this

bottom holds and is not broken, then you can put on the other angles from the bottom.

WEEKLY CHART: If a stock is declining and reacts for more than one week and continues down, we will say, for three weeks or more, then starts to rally and advances two weeks or more, you would start to put the angles on from the low point of the decline, only using the angles above the 45° angle until the stock again breaks under the 45° angle- after that you would use the other angles on the lower or bearish side of the Square.

WHAT TO DO AFTER THE 45° ANGLE FROM BOTTOM IS BROKEN

After a stock makes top, either temporary or otherwise, and breaks under the 45° angle and starts moving down, then the first thing you do is to draw angles below the 45° angle, starting from the bottom or low point. Note example marked "Form #3":



FIRST ANGLE ON BEAR SIDE OF THE SQUARE: 2 x 1 The first angle that you draw on the bear side of the Square is the angle of 2 x 1 or 2 points over and one point up, which moves at the rate of one-half point per day, week or month and measures 26½°. This is the first support angle which the stock should reach after it break under the 45° angle. As a general rule, when the stock reaches this angle, it

will receive support and rally. Sometimes it will rest on it for a long period of time, holding on this angle and making higher bottoms. But when this angle of 2 x 1, or moving-average of one-half point per day, week or month is broken, then you must draw the next angle of 4 x 1.

NEXT IMPORTANT ANGLE: 4 x 1 — The next important angle on the bear side of the Square, which moves up at the rate of 1/4-point per day, is the angle of 4 x 1, measuring 15°. It will be the next strong support angle which the stock should get support on and rally from.

NEXT ANGLE 8 x 1: Then after the 4 x 1 angle is broken, the next important angle that you will put on your chart is the angle of 8 x 1, which moves at the rate of 1/8-point per day, week or month and measures $7\frac{1}{2}°$. This is often a very strong support angle. After a stock has had a big decline, it will often rest on this angle several times or may make final bottom and start up from this angle, crossing other angles and getting back into a strong position again. Therefore this angle is important to use on a monthly or weekly chart after a prolonged decline.

ANGLE 16 x 1: This angle can be used on a monthly chart after a long period of time has elapsed from an important bottom. It moves at the rate of 1/16 point per month and measures $3\frac{3}{4}°$.

ANGLE OF 3 x 1: This angle, drawn in red ink, is a very important angle, measuring $18\frac{3}{4}°$. I strongly advise using it at all times and keeping it up on monthly charts from any important bottom. It can also be used to advantage at times on weekly charts, but is seldom of much value on a daily chart. It moves at the rate of one-third point per day, week, or month. By drawing this on the monthly chart for a long period of years, you will soon be convinced of its value and also by testing it on a weekly chart, will find it valuable.

This completes all of the angles that you will need to use from any bottom at any time.

HOW TO DRAW ANGLES FROM TOPS ON DAILY, WEEKLY OR MONTHLY CHARTS

POSITION UNDER 45° ANGLE DRAWN FROM TOP: After a stock has made top and declined for a reasonable length of time, say, three days, three weeks or three months, breaking previous bottoms, then you start to draw angles down from the top. Note example marked "Form #4", which is the pattern for drawing angles from the top under the 45° angle. (see page 10)

45° ANGLE FROM TOP: The first angle you draw is the angle of 45° or a moving-average which indicates a decline of one point per day, week or month. As long as the stock is below this angle, it is in the weakest position and in a bear market.

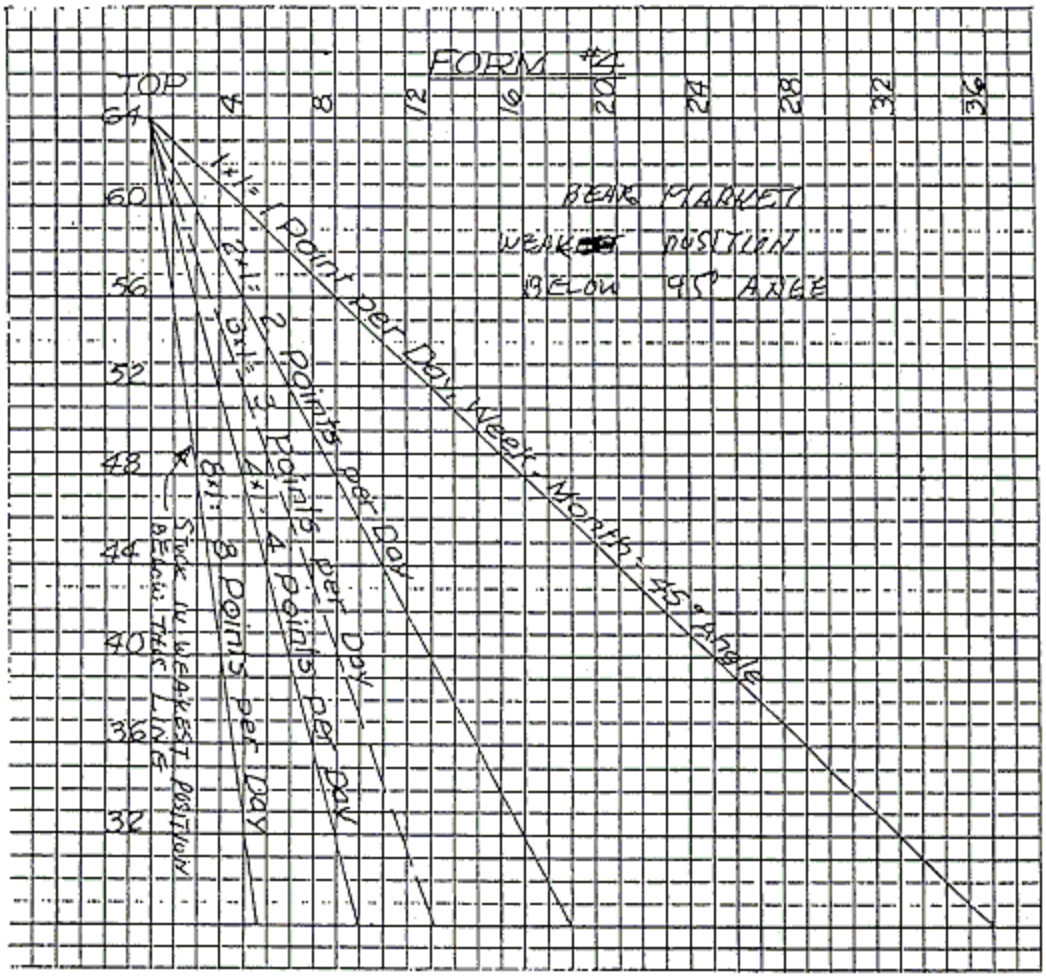
OTHER ANGLES: In many cases a stock will start declining an average of 8 points per day, week or month, or 4 points per day, week or month, or 2 points per day, week or month, therefore you should put on all of those angles from the top, which move down faster than the angle of 45°.

WEAKEST POSITION: The stock is in the weakest possible position when it declines and keeps under the angle of 8 x 1. It is in the next weak-

est position when it is dropping down at the rate of 4 points per day, week or month, or under the angle of 4 x 1. It is in its next weakest position when it is dropping down under the angle of 2 x 1.

STRONGEST POSITION: The stock is in a stronger position and indicates a better rally when it crosses the angle of 2 x 1, but this depends on how far it is down from the top and how far the angles are apart, as will be explained later under the rules.

CHANGING TREND: As long as a stock is declining one point per day, week or month, or falling below or under the 45° angle, it is still in a bear market and in a very weak position. When a stock rallies and crosses the angle of 45° after a prolonged decline, then you are ready to put on the angles on the other side of the 45° angle, which shows that the stock is in a stronger position in a bear market and may be getting ready to change into a bull market.



POSITION ABOVE 45° ANGLE DRAWN FROM TOP

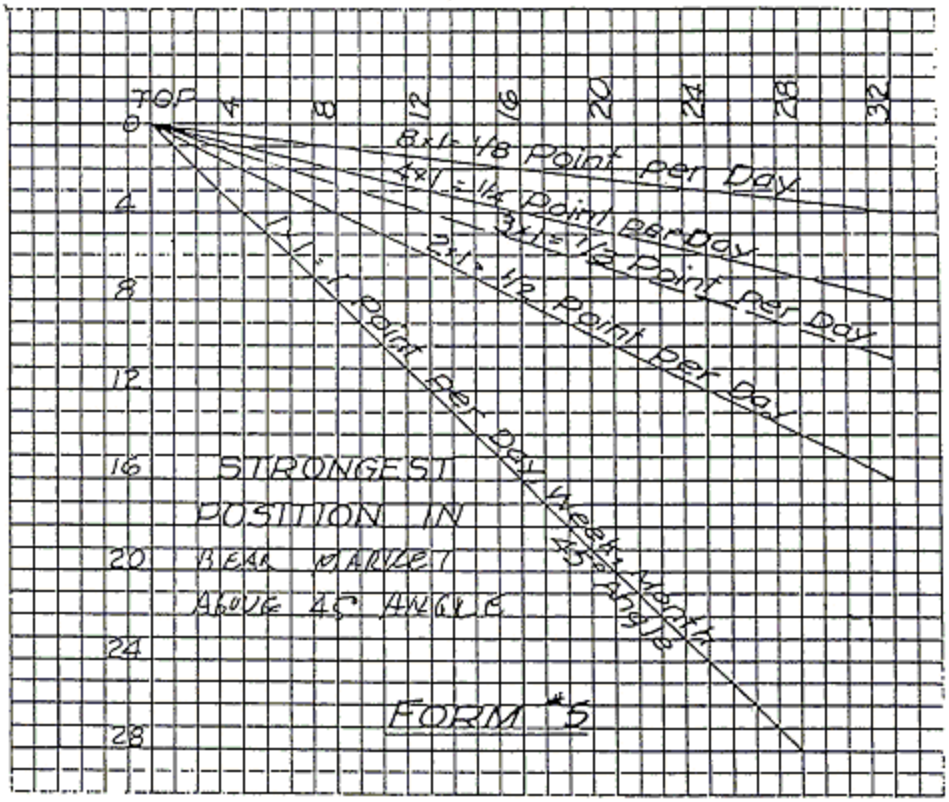
Refer to Form #5, which is the pattern for drawing angles above the 45° angle from the top. (See page 11)

2 x 1 ANGLE FROM TOP: The first angle or moving-average you draw after the 45° angle from the top is crossed and after the stock indi-

cates that it has made a temporary bottom is the angle of 2 x 1, moving over 2 points and down one point, or 1/2-point per unit of Time. This is moving down at the rate of 1/2-point per month, week or day.

4 x 1 ANGLE: The next is the angle of 4 x 1 which moves down at the rate of 1/4-point per day, week or month.

8 x 1 ANGLE: The next angle is the angle of 8 x 1, which moves down at the rate of one point every 8 days, 8 weeks or 8 months, or 1/8-point per time period.



STRONG POSITION: After the stock has crossed the angle of 45° and rallied up to the angle of 2 x 1, it will meet selling and react to some angle coming up from the bottom of the last move, but it is in a stronger position when it holds above this angle of 2 x 1 and is in the next strongest position when it crosses the angle of 4 x 1. Crossing the angle of 8 x 1, which is of least importance, it indicates that it is in a very strong position again from the top. You must always consider a movement coming up from bottom and its position on angles from the bottom to determine its strength. It is important to consider the number of points it has moved up from the bottom and how many points it is down from the top.

3 x 1 ANGLE: The angle of 3 x 1 drawn in red on Form #5 moves down at the rate of one point every three days, three weeks or three months, or one-third point per day, week or month. This angle is important to use after prolonged declines.

This completes the forms of all the angles that you will need to use at any time from tops or bottoms. Practice putting these angles on tops and bottoms until you thoroughly understand how to do them and know that you are getting them

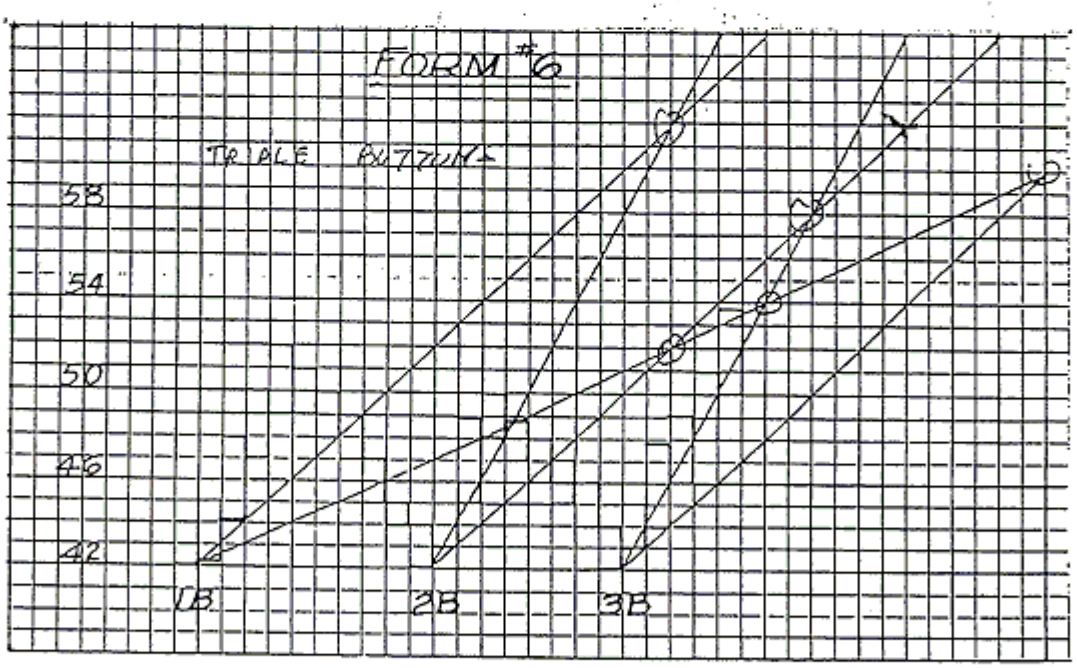
absolutely accurate. Then you can begin to study the rules for determining the trend according to the position of the stock on angles.

DOUBLE AND TRIPLE TOPS OR BOTTOMS

ANGLES CROSSING EACH OTHER: When there is a double bottom several days, weeks or months apart, you draw angles from these bottoms, which are near the same price levels. For example: From the first bottom draw a 45° angle and from the second bottom draw an angle of 2 x 1- then when these angles cross each other, it will be an important point for a change in trend. Note on chart marked Form #6 that I have drawn the 45° angle from the first bottom "1B" and the angle of 2 x 1 on the right hand side of the 45° angle. Then, from the second bottom "2B" I have drawn a 45° angle and the angle of 2 x 1, which gains 2 points per day, week or month, on the left hand or bull side of the 45° angle. You will note that the angle of 2 x 1 from the second bottom crosses the angle of 2 x 1 on the bear side from the first bottom at 48, and that when the stock breaks under these angles, a change in trend takes place and it goes lower.

Note that the angle of 2 x 1 from the third bottom "3B" crosses the angle of 2 x 1 on the bear side from the first bottom at 53½ and crosses the 45° angle from the second bottom at 58. This would be a point to watch for change in trend. I have placed a circle where those angles from the different bottoms come together

Apply this rule to double tops and triple tops in the same way. It is not necessary for the tops or bottoms to be exactly at the same price level, but near the same level. Remember, always draw 45° angles from all important tops and bottoms.



PARALLEL ANGLES

Parallel angles or lines run from important tops and bottoms. As previously explained, the 45° angle is the most important and should be drawn from all important tops and bottoms. If a stock starts advancing, we draw a 45° angle from the bottom- then if the stock makes top, declines and makes a higher bottom- then

advances and makes a higher top, we draw a 45° angle from the first top, running the line up. This will give the oscillation or width of fluctuation in a parallel between the 45° angle from the bottom and the 45° angle running up from the top. Often a stock will advance to the 45° angle from the first top, fail to cross it, then decline and rest on the 45° angle from the first bottom- then advance again, working up for a prolonged bull campaign between these parallel angles.

When the angles are very far apart, you can draw another 45° angle equidistant between them, which is often a strong support angle from which a stock will rally, but when it breaks under, it declines to the bottom parallel.

Parallels can form between the angles of 2 x 1 or 4 x 1 just the same as between 45° angles, which often occurs in slow-moving stocks.

GEOMETRICAL ANGLES OR MOVING-AVERAGE LINES DRAWN FROM "0"

When a stock reaches bottom and starts up, you have been instructed to draw angles from this exact low point, which shows the support in time periods, but there are other angles that later on will be just as important and sometimes more important than the angles drawn from the bottom of a stock. These are the angles that begin at "0" or zero and move up at the same rate that they move up from the bottom. The starting point must be on the same line that the bottom is made on as the time period begins from this bottom, but the angles move up from "0". These angles should be started every time a stock makes a bottom, especially on weekly and monthly charts, and should also be carried up on important movements on the daily chart. Example: See chart marked Form #7 on page 14.

If a stock makes low at 20, as shown on the chart, starting the 45° angle from "0", when will this angle reach 20? Answer: It will reach 20 in 20 days, 20 weeks or 20 months from the bottom or its starting point. In other words, in 20 days, 20 weeks, or 20 months, it will be up 20 from "0" and at the price where the stock made bottom. Then the angle will continue on up at the same rate, and later, when the stock breaks under the 45° angle from the actual bottom made at 20 and breaks the other support angles drawn from the actual bottom at 20, the next important point for support will be the angle of 45° moving up from "0". When this angle is broken, it is in the weakest possible position and indicates much lower prices, but this depends on how high the stock is selling and how much it has declined at the time it breaks the 45° angle from "0". These angles drawn from "0", especially the 45° angle, proves when Price and Time are balancing or when the stock is squaring out from its bottom.

"0" ANGLES STARTING AT THE TIME TOP IS MADE

When a stock reaches extreme top on a daily, weekly or monthly chart and the trend turns down, you should start an angle of 45° from "0" moving up from the exact space and date that the top is made. This will prove the square of the time period. It is very important when this angle is reached and indicates a change in trend. It is the last strong support and when broken, it will indicate much lower prices.

I have instructed you in each case to first draw the 45° angle from bottom, top and from "0" at bottom and top, but this does not mean that you must not use the other angles. All of the other angles can be used from "0", but the 45° angle is the first and most important. After this angle is broken, then you can use the other angles. It is not necessary to carry all of them along until you

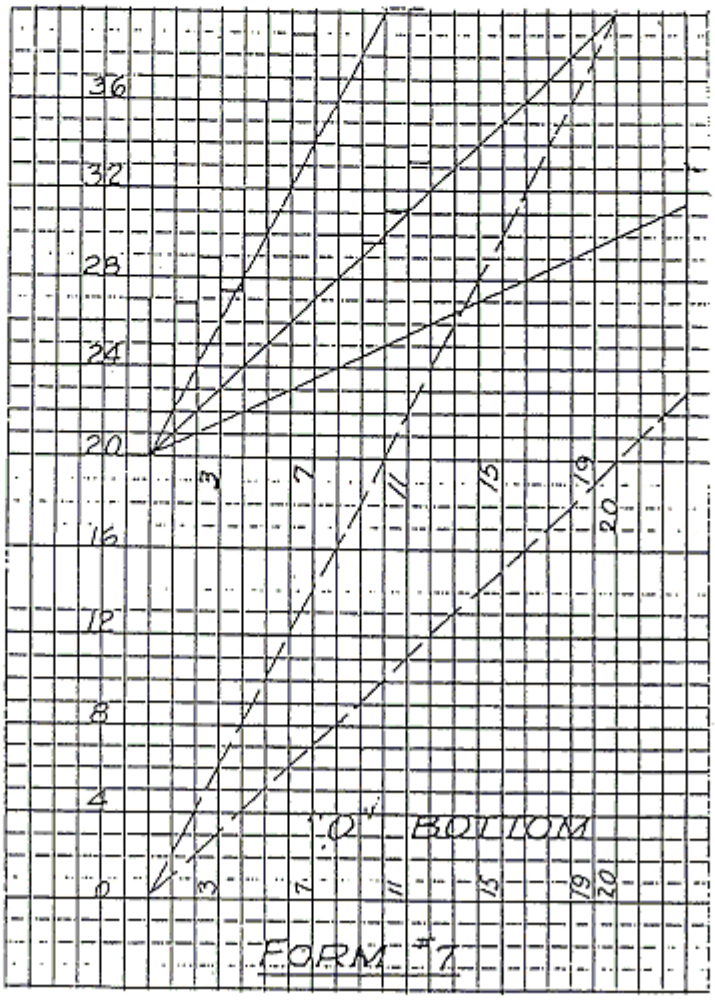
need them, but on the monthly chart, after a long series of years, these other angles should be carried along when the stock begins to approach the levels where they would be broken or where the stock would rest on them and receive support.

45° ANGLE FROM "O" TO TOP AND BOTTOM: When a 45° angle moving up from "O" reaches the line or price of the bottom, it is very important- then again when it reaches the point of the extreme high price, it is very important for a change in trend.

You should carry 45° angles and other angles up from "O" from all important first, second, and third higher bottoms, especially those where very much time has elapsed between these bottoms. You should also start the angle of 45° up from "O" from the first, second, and third lower tops, especially those which show much time period elapsed. These angles are the most important to be carried on the weekly and monthly charts.

Never overlook keeping up the angles from "O" because they will tell you when Time is squaring out with Price from tops and bottoms and will locate support angles or moving-average lines at a point on the bear side after the first 45° angle from a bottom is broken. You could not locate this support point in any other way except by the angles from "O".

You should go back over past records and bring up these angles and square out different tops and bottoms so that you can prove to yourself the great value of using these angles.



ANGLES FROM TOPS DOWN TO "0" AND UP AGAIN

A 45° angle starting down from any important top on a monthly or weekly chart should be continued down until it reaches "0" and then started up again at the same rate. After a long number of years between important tops and bottoms, this angle coming down and going up again is important. A 45° angle can also be continued down from any important bottom to "0" and then started up again. This will show the squaring of Price with Time from either top or bottom.

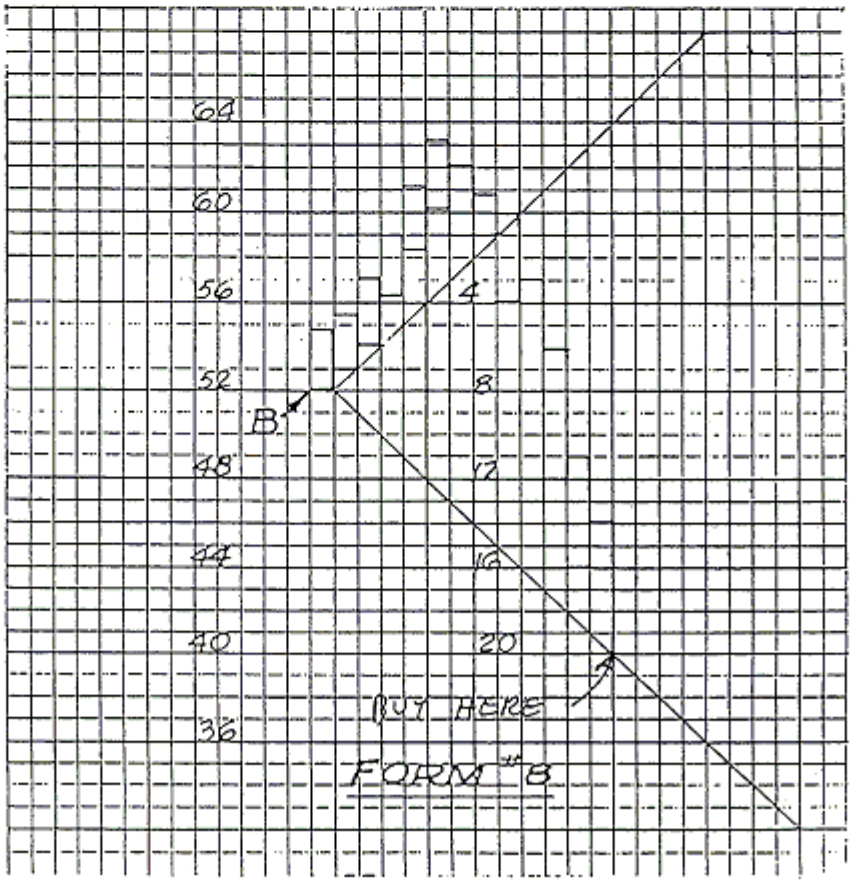
Angles can be started from "0" at the time any important time cycle runs out. For example: U. S. Steel made extreme low in 1904. May, 1924 would be the end of a 20-year cycle or 120 months. In May, 1924 Steel made top at 109 against a 45° angle beginning at "0" at the time bottom was made at 38 in February, 1915. On account of the importance of this top and a 20-year cycle running out here, we would start a 45° angle and other angles, if we need them, from "0" in May, 1924.

May, 1931 would end a 7-year cycle of 84 months from 1924. The 45° angle running up from "0" in May, 1924 crossed at 84 in May, 1931. Note that Steel made low at 83⅛ in June, 1931. In June, 1924 Steel made the last low at 94¼, showing the importance of the end of the 20-year cycle. The 45° angle moving up from "0" in June, 1924 crossed at 84 in June, 1931, and Steel declined and rested on this angle.

TWO 45° ANGLES FROM THE SAME BOTTOM

As we have previously explained, the 45° angle moves up at the rate of one point per month and moves down at the rate of one point per month.

Refer to example on Chart #8:



You will note that the low on this chart is shown as 52 and the stock moves up to a high of 63. A 45° angle is drawn up from the bottom, and after the stock reaches top and starts to work down, it breaks the 45° angle, getting under it at a price of 59. You will note that I have drawn another 45° angle down from the bottom at 52. At the point where the stock breaks under the 45° angle moving up from 52 to the 45° angle moving down from 52, the distance in points is 16, therefore the angles have widened until the stock could decline 16 points, if it went straight down, before it reached the 45° angle moving down from the bottom.

Note that I have shown on the chart that the stock continues down until it reaches 40, where it rests on the 45° angle from the bottom at 52. This would indicate the strongest support point and at least a temporary rally, especially as the stock is down 23 points from the top. Later you will find under "Resistance Levels" that 22⅛ to 24 points is a strong support point.

U. S. STEEL: Take the extreme low point of U. S. Steel at 111¼ in January, 1927. Start a 45° angle on the monthly chart moving up at the rate of one point per month- then start a 45° angle moving down at the same rate. This shows the spreading of the angles and what can happen when Steel breaks under the 45° angle coming up from that bottom and the point where it can decline in extreme panicky markets, like 1931 and 1932.

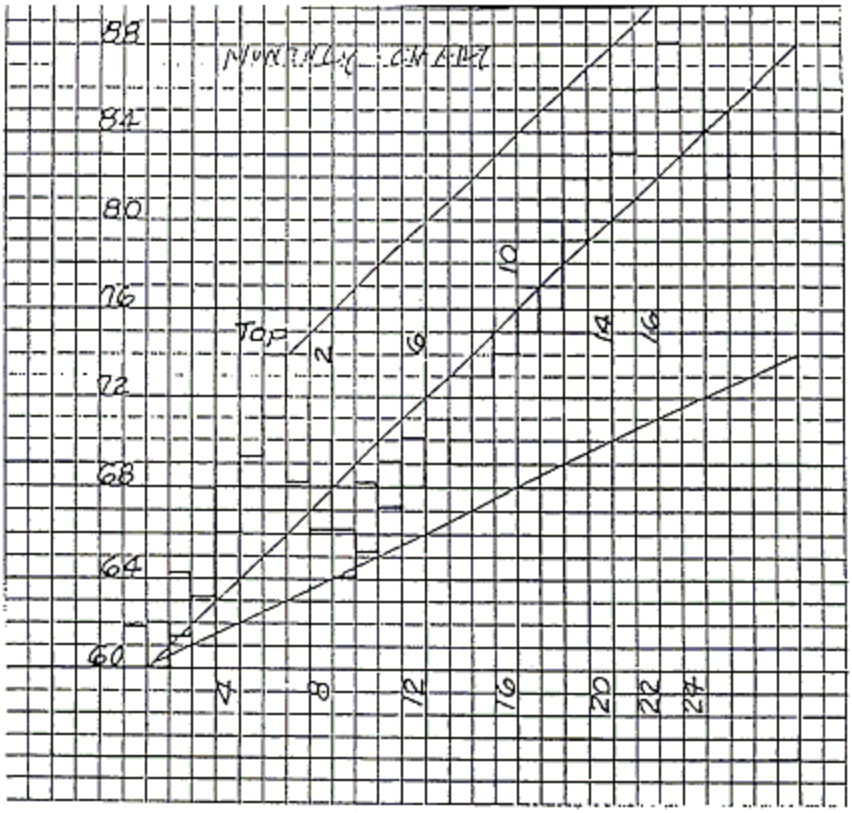
The 45° angle coming up from the low of January, 1927 crossed at 156 in October, 1930. When U. S. Steel broke this angle it went right on down to 134⅜ in December, 1930, where it rested on the angle of 2 x 1 from this bottom of January, 1927- then rallied to February, 1931, and at the time it broke under the angle of 45° from 111¼, it was on the 45th month, another indication of a sharp, severe decline. Here we look at the 45° angle moving down from 111¼ and find it is 90 points down from the 45° angle moving up from 111¼. These angles separate at the rate of two points per month and being 45 months from the bottom, the stock would have to decline 90 points to strike the 45° angle moving down from the bottom. The angles being so wide apart indicated that the stock could have a wide-open break. This happened in December, 1931, when Steel broke under the 45° angle moving down from 111¼, putting it into a very weak position- in fact, in the weakest position that a stock can get in until it can recover this angle. In June, 1932, when U. S. Steel declined to 21¼, it had dropped under the 45° angle moving down from the last low of 113⅜ made in March, 1925, and closed two months below this angle before it started to recover angles.

This shows that when a stock gets into a very weak position by dropping under important angles moving down from bottoms, after having broken strong angles moving up from bottoms, it can decline to very low levels. These extreme fluctuations and declines have happened in the past and will happen again in the future. This proves the squaring out of Time on the down side or the balancing up of Price and Time.

Here is another illustration of the balancing of Price with Time: The angle of 45° moving up from "0" from the bottom at 21⅞ from October, 1907 crossed at 262 in September, 1929 and Steel advanced to 261⅝, which shows that in 262 months from the bottom in 1907 Steel had advanced an equivalent of one point per month. By striking the 45° angle and failing to cross it, it indicated that the Time was up and that the stock was turning downtrend for a prolonged bear market.

ANGLES OR MOVING-AVERAGE LINES FROM ONE TOP TO THE NEXT TOP

Refer to example on Chart #9 on page 17.



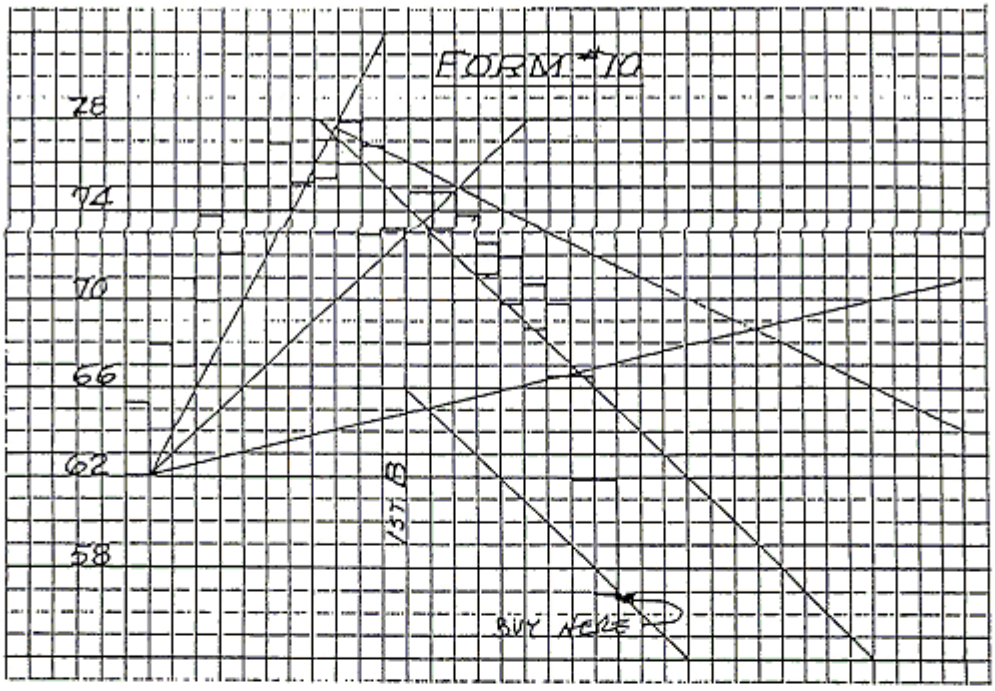
You will see that we have started the bottom at 60. The stock advances six months to 74, to a point marked "T" and makes top--reacts for three months to 64, breaking the 45° angle but resting on the angle of 2 x 1 from the bottom--then starts advancing and finally crosses again the 45° angle from 60, getting into a stronger position, having regained this angle. In order to determine where it might meet resistance, as it is in new high territory, we draw a 45° angle from the top at 74. The stock advances to 90 on the 22nd month from the bottom, striking the 45° angle from the first top at 74, on the 16th month from the first top. Being 16 points up above the first top, the Time equals the advance in the Price above the first top. The 45° angle shows that this is a strong Resistance point and a place to go short with stop one to three points above the 45° angle. A decline starts and in the third month the stock again breaks under the 45° angle from the bottom (at 60) at a very high level. In other words, it is 24 points up from the bottom and is now in a much weaker position, because it is so far from the base of support, and indicates a decline again to the angle of 2 x 1 (marked in green).

Don't overlook this rule: After a stock has advanced to a new high level, then declines to the old top at 74, this may be a support point unless it breaks 3 points under it. If it does and also breaks the angle of 2 x 1, it will be in a weaker position and the next point to watch for support and a rally would be the next bottom at 64.

ANGLES FROM BOTTOM OF FIRST SHARP DECLINE

When a stock that has been advancing for some time, makes top and holds for several days, several weeks or several months, then turns the trend down and has a sharp, severe decline, there is always a rally after this first decline. It usually makes a lower top on this secondary rally and then starts to work lower again. The bottom of the first decline is a very important point to draw angles

from, especially the 45° angle moving down, as I have done on the chart marked Form #10.



This chart shows the stock rallying up to around 75, where the 45° angle coming up from the last bottom crosses the angle of 2 x 1 coming down from the top. Then the decline started and at 66 the stock broke back under the angle of 45° from the top, which put it in a very weak position. It declined to the angle of 45° coming down from the bottom of the first sharp decline. This would be the squaring out of time from the bottom and would be a place to buy for a rally. A stock will often decline and drop a little below this angle from the bottom--then if it holds for several days or weeks under this angle or on it, it is a place to buy for a rally.

On a Monthly Chart always carry this angle down from the bottom of the first sharp decline, as it often becomes very important later on in a campaign.

After a stock has been advancing for some time and then has a sharp break lasting 2 to 3 days, 2 to 3 weeks, or 2 to 3 months--then rallies and afterward breaks under the lows of this first sharp break, it indicates that the main trend has turned down and that it is going lower.

Apply the same rule when a stock has been declining for a long time and then makes a sharp, quick recovery for 2 to 3 days, 2 to 3 weeks, or 2 to 3 months, then reacts and then crosses this first rally point that it made, an indication of higher prices.

LAST SWING IN A BULL OR BEAR MARKET

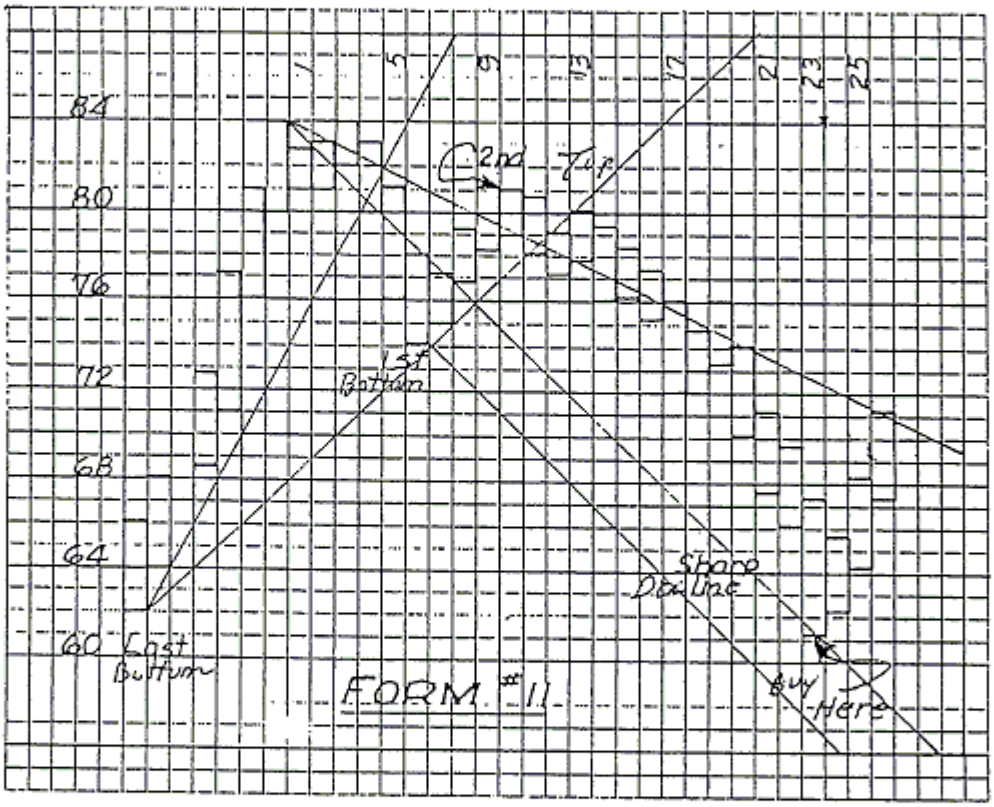
It is important to draw angles from the point where the market starts up and makes its last run in a bull market. Refer to Chart #11 on page 19.

In this example note point marked "last bottom". In the last stage of the bull market a fast advance follows to a price of 84. We have drawn the angle

of 2 x 1 (a gain of 2 points per day, week or month) and the 45° angle from this bottom. When the angle of 2 x 1 was broken, it indicated that the trend had turned down. The stock declined and rested on the 45° angle--then rallied and made a second lower top-- then broke the 45° angle-- declined sharply and rested on the 45° angle drawn from the top at 84, which indicated that Time and Price had squared out or were equal. This would be a point to buy, with a stop loss order 2 to 3 points under this angle, for a rally back to the angle of 2 x 1 from the top, as shown on the chart.

In very active fast-moving markets a stock may stay above the angle of 4 x 1 or the angle of 8 x 1 from the "last bottom," but on the daily or weekly chart after this first acute angle is broken, it indicates that the trend has turned down.

Always remember that after a prolonged advance, when the main trend turns down, it is safer to wait for rallies and sell short than to buy against the trend.



All of those rules are reversed at the end of a bear market or sharp decline. It is important to note when the market starts down from the last top or rally and makes its last run to bottom. Draw angles from this last top and watch when the market reaches these important angles and crosses them. For example:

On March 9, 1932 the Dow-Jones 30 Industrial Averages made last top at 90, from which a decline followed, with very small rallies, reaching bottom at 41 on July 8, 1932. Note on the weekly chart that the angle of 2 x 1 from the top at 90 crossed at 50 in the week ending July 30, 1932 and after they crossed this level they never declined to 50 again, and advanced to 81 in September, 1932. The cross-

ing of this angle was the first definite indication that the main trend had turned up.

It is also important to review the major swing from November 9, 1931, when the Averages reached a high of 119½, to the low at 40½ in July, 1932. This was the last big swing of the bear market, a decline of 79 points. The half-way point of this was at 80. In September, 1932 the Averages rallied to 81-- then after they reacted to 50 and advanced, getting above the half-way point, and crossed 81, they indicated an advance to 119 anyway. After they crossed the half-way point the second time and advanced above 81, they never sold down to it again until they advanced to 149¼ in November, 1935.

After a stock has been advancing for a long time, in the last run when there is a lot of momentum, it may cross angles from previous tops or bottoms, then fall back under them, which is an indication of weakness. When a stock has a sharp decline and is making bottom, it will drop under important angles and then recover quickly, getting above them, which shows that it is getting into a strong position and changing trend.

ANGLES FROM HIGHER BOTTOMS AND LOWER TOPS

What rule should be followed when stocks make higher bottoms and lower tops?

As stocks advance and make higher bottoms on the monthly, weekly or daily chart, you should always draw angles from higher bottoms. Then, in the last section of a bull market, if these important angles are broken from the last bottom, you know that the trend has turned down.

Apply this same rule as a market declines. Draw the angles from each lower top and watch the angles until the stocks again cross the 45° angle from a second, third, or fourth lower top. The second lower top or second higher bottom is always very important to draw angles from and to measure Time from as well.

Example: Dow-Jones Industrial Averages—

September 3, 1929	- Extreme high-
November 13, 1929	- Bottom of first sharp decline-
April 17, 1930	- Big rally in bear market, second lower top-
July 8, 1932	- Extreme low, final bottom-
September 8, 1932	- Top of first sharp advance after bear market ended-
February and March, 1933	- Second higher bottom from which bull market was resumed.

These are the most important tops and bottoms to draw angles from.

SECTIONS OF MARKET CAMPAIGNS:

All market campaigns, up or down, move in 3 to 4 sections. When an advance starts, the market runs for several weeks or several months and then halts for several weeks or months, moving up and down over a range of 5 to 20 points, according to the price of the stock--then the advance is resumed and the stock crosses the high level of the first section, moves higher, halts again, and reacts for a period of time-- then crosses the top of the second section and moves up again for another period of time and halts for the third time, which is a very important point to watch as markets often culminate at the end of the third section and a bigger decline follows,

Most markets run out in three important sections or campaigns. However, after resting and reacting, if a stock crosses the third top, it will then move up to the top of the fourth section. This fourth advance may be a shorter period of time than the previous sections, or in some cases may consume a greater period of time, especially if the stock is very active and high-priced. This fourth top is very important and generally marks a culmination and a reversal for a bigger decline.

For example: On March 12, 1935 CHRYSLER MOTORS declined and made low at 31--

FIRST SECTION of the advance carried the stock up to 49⅜ on May 16- then the stock declined to 41¼.

SECOND SECTION— On June 27 the advance started and the stock advanced to new high levels, reaching 62⅜ on August 10, which was top of the second section- then there was a reaction to 57½ and a resting period.

THIRD SECTION— Then there was another advance which started August 28. The stock crossed the top of the second section and reached high at 74 on September 11, top of the third section. Then followed a reaction to 68 on September 21.

FOURTH SECTION— In October the top of the third section was crossed and on November 18 Chrysler reached 90, top of the fourth section, where it held for 5 weeks in a 6-point range while distribution was taking place. This was a most important point to watch for a final top and a change in trend. Then the trend turned down.

Reverse this rule in a bear market. Watch the action of the market when it makes the third and fourth decline. But, remember, in a bear market when rallies come, they may make only one section or one move or in extreme cases only make the second section- then reverse and follow the main trend down.

You will find it very helpful to study and watch these various sections of a campaign and by applying the angles from tops and bottoms you can detect the first minor and major changes in trend.

STRENGTH OR WEAKNESS DENOTED BY POSITION ON ANGLES

The angles on the Monthly and Weekly Charts are of greater importance than those on the Daily Chart because the daily trend can change quite often, while only the major changes are shown according to the angles on the Monthly and Weekly Charts.

Always consider the distance a stock is from its beginning point when it breaks any important angle or crosses any important angle. The further away from the beginning point, the more important the change in trend, whether this is crossing an angle from the top or breaking under an angle from the bottom.

WHEN A STOCK IS IN THE WEAKEST POSITION:

A stock is in the weakest position when it has completed distribution and broken under a 45° angle from an important bottom on the weekly or monthly chart. It is also in the weakest position when it has broken under the half-way point between any important top or bottom. The longer the time period has run and the higher the price, the weaker the position, For example:

If a stock has advanced to 150 and has only moved down 25 points when the 45° angle from an extreme low on a weekly or a monthly chart is broken, then it is in a very weak position because it is so far above the half-way point on its price movement, already having squared out the time period with price.

Weakness in a stock develops when it breaks the 3/4-point, the 2/3-point, the 1/2-point, etc., but the position on the timing angles from the bottom tells you still more about the weak position. A stock shows its first weakness when it breaks the first important angle coming up from the last bottom in the final run in a bull market.

WHEN A STOCK IS IN THE STRONGEST POSITION:

A stock is always in the strongest position coming up from a bottom when it is holding above the very acute angles on the daily, weekly or monthly charts, especially on monthly and weekly charts.

As long as a stock holds above the angle of 2 x 1 (a gain of 2 points per day) on the daily chart, it is in a very strong position as far as the bottom is concerned. In fact, it is always in a strong position on the daily as long as it holds above the 45° angle. The same applies to weekly and monthly charts, which are the most important trend indicators.

I have found that the stocks which have the biggest advances are those that always hold above the angle of 2 x 1 on the monthly chart or gain 2 points per month for a long period of time. I have seen stocks rest 10 or 15 times on the angle of 2 x 1 and never break it until they have advanced 100 points or more. In this way a stock stays ahead of time and stays within the square of time by being far above the angle of 45°, and therefore is in a very strong position. But the time must come when the cycle has run out and the main trend begins to change from a bull market to a bear market--then the breaking of the angle from the last bottom shows a change in trend.

Another indication that a stock is in a strong position is when it advances and moves up above the half-way point of the previous price movement and then holds the half-way point, that is, advances above it and then reacts and fails to break under it. This is just the same as resting on a 45° angle and indicates a very strong position.

STRONGEST BUYING AND SELLING POINTS:

The cinch buying point is when a stock rests on a 45° angle, placing a stop loss order below it.

Another point to buy is on the half-way point of the price movement, placing a stop loss order under the half-way point.

When the main trend is up, it is also safe to buy when a stock reacts to the angle of 2 x 1 (a gain of 2 points per time period) on the weekly or monthly chart.

REGAINING ANGLES OR CROSSING LINES:

Remember, when any stock breaks under the 45° angle from the extreme low point of a move on the daily, weekly or monthly chart, it is then in a very weak position and indicates a decline to the next angle. However, when a stock can

regain the 45° angle, it is in a stronger position.

The same rule applies to a 45° angle drawn up from any top. When a stock crosses the angle on the daily, weekly or monthly and stays above the 45° angle or any other angle to the left of the 45° angle, it is in a very strong position.

After a stock once drops below or gets above any important angle and then reverses its position by getting back above the angle or dropping back below it, it changes the trend again.

WHEN A STOCK IS IN STRONG POSITION FROM BOTTOM AND IN WEAK POSITION FROM TOP:

A stock is in a strong position from the bottom when it is keeping above the angle of 45° or the angle of 2 x 1, but at the same time it can be in a weak position when it rallies up and strikes against a 45° angle or the angle of 2 x 1 coming down from the top— then it is a short sale until it can cross these angles or cross previous tops. When it breaks the angles from the bottom, it is in a weak position and indicates lower.

A stock can be in a strong position from the top and in a weak position from the bottom, that is, it may cross some important angles from the top after a long period of time, but at the same time may break under the 2 x 1 angle or 45° angle from the bottom, which would indicate that it is in a weak position and getting ready to go lower.

WHEN ANGLES FROM EXTREME TOP ARE CROSSED:

The 45° angle drawn from the extreme high point of a stock is most important and when it is crossed, a major move may be expected. For example:

On the weekly chart of the Dow-Jones Industrial Averages, note the 45° angle moving down from 386, the high of September 3, 1929. January 12, 1935 was 279 weeks from the 1929 top. Taking 279 from 386, we get 107, the price at which the angle of 45° would cross. These Averages advanced to 106½ in the week ending January 12, 1935— then reacted to 100 in the week ending February 9. This was the first time that they had held within one-half point of this angle and the first time that they had ever reached it since the top was made. During the week ending February 16, 1935, the Averages crossed the 45° angle at 103 for the first time, and during the week ending February 23, 1935 advanced to 108, where they hit the angle of 45° moving up from the low of 85½ in September, 1934, and also hit the angle of 2 x 1 coming up from the low of July 8, 1932. This was a strong resistance point and the Averages reacted to 96 in the week ending March 18, 1935, where they rested on the 45° angle from the 1929 top and also where the 3 x 1 angle (a gain of 1/3 point per week) from September, 1929 coming up from "0" crossed the angle of 45° coming down from the 1929 top. This was a strong support point for a change in trend. The advance started and the Averages moved up to new high levels. This proves the importance of angles, especially the 45° angle drawn from any extreme top, and the point at which any other angle crosses the 45° angle.

Watch the 45° angle from 1929 top when it reaches "0" or when it is 386 weeks down from the top. This will be in the latter part of January, 1937. Note what happens at that time.

ANGLES FOR SEMI-WEEKLY CHART

The semi-weekly chart is a great help at the end of extreme advances or

extremes declines. By applying all of the rules and using the geometrical angles from tops and bottoms on the semi-weekly chart, you will often get an indication of a change in trend two to three days before a change in trend is shown on the weekly chart.

A change in trend on the semi-weekly chart is of greater importance than a change in trend on the daily chart. It is much better to rely upon this chart than on the daily chart when markets are in a narrow trading range.

ANGLES FOR NEW LISTED STOCKS

Years of experience and research, which has cost me a large amount of money have enabled me to develop a method that will account for all market movements and give rules to determine the trend from any top or bottom.

It is important to know how to determine the trend when a stock is first listed on any exchange. When a stock has never fluctuated before, we have no top or bottom to draw angles from. Therefore, in order to determine the trend, we use the square of 90, which is 90 up and 90 across, and put all the natural angles on, like the Pattern Chart. As we have said before, the square of 90 is very important because it is one-quarter of a circle of 360°, and as 90° or the vertical angle is the greatest angle that can be used, all of the other angles are found between "0" and "90".

If a new stock opens at 18 or any point below 22½, then you could make out a square of 22½ to determine the position of the stock on angles. If the stock opened at 36 or any point between 22½ and 45, you could make up a square of 45. If it opened at 50 or between 45 and 67, you could make up a square of 67½. However, you could place any stock opening at any price below 90 in the square of 90 and get its proper position and strength or weakness on angles. If the stock opened at 100 or above 90 and under 135, you could make up a square of 135, or could make another square of 90 numbering from 90 to 180.

You could start a monthly chart on a square of 90 at the price where the stock opens or trading begins, as shown on U. S. Steel. (Refer to Special Analysis of U. S. Steel.) After the stock breaks any of these natural angles drawn from "0", it is just the same as breaking under an angle drawn from a bottom. When it crosses any of the angles drawn down from "90", it is just the same as crossing an angle from a top, as you can see by experimenting with U. S. Steel or any other stock, but always consider price resistance levels and how much the stock is up or down from the bottom or top. You can determine the first change in trend by the 3-day or semi-weekly Chart, daily chart, and weekly chart by bringing up the important Geometrical Angles from any higher or lower bottom as the market movements develop.

QUICK CALCULATION OF ANGLES

It is not necessary to draw these angles from a point a long way back. You can make the calculation and determine where they cross. For example: Suppose in 1900, in the month of January, a stock made bottom at 15, and we wish to calculate where the 45° angle will cross 10 years later in January, 1910. The 45° angle rises at the rate of one point per month- then 10 years would be 120 points or months-- add this to 15 at the bottom-- then the 45° angle would cross at 135 in January, 1910. All of the other angles may be calculated a long period back in the same way.

ANGLES SELDOM USED

3 x 2 ANGLE: This angle of 3 x 2 on the left side of the 45° angle rises at the rate of 8 points in 12 months. A stock must show a gain of 3/4-point per month in order to keep above this angle. This angle can be used when other important angles from the bottom have spread far apart, as it will show the position and resistance or support point between the other angles.

LATITUDE AND LONGITUDE

On all charts--daily, weekly or monthly--the price must move up or down on the vertical angles. Therefore, the price movement is the same as latitude. You should begin with zero or "0" on any chart--daily, weekly or monthly--and draw the important angles and resistance levels across, which measure latitude.

Next, number the time points in days, weeks or months across, and draw the horizontal angle at each important natural angle, such as, $11\frac{1}{4}$, $22\frac{1}{2}$, $33\frac{3}{4}$, 45, $56\frac{1}{4}$, $67\frac{1}{2}$, $78\frac{3}{4}$, 90, $101\frac{1}{4}$, $112\frac{1}{2}$, 120, etc. Then you will know when price reaches these important angles and meets resistance.

Longitude measures the time running across the chart, as it moves over each day, week or month. Therefore, you must keep your chart numbered from each important top and bottom in order to get the time measurements according to angles. These important angles, such as, $11\frac{1}{4}$, $22\frac{1}{2}$, $33\frac{3}{4}$, 45, $56\frac{1}{4}$, 60, $67\frac{1}{2}$, $78\frac{3}{4}$, 90, etc. from each bottom and top will show you where the strongest resistance in price and time takes place. These angles prove the parallel or crossing point. Study past records and see what has happened when prices on monthly charts reached these important angles or time periods.

For example, 90 points up in price from "0" we draw an angle horizontally across the chart. Then 90 days, weeks or months, going to the right across the chart, we draw a vertical angle up, which will cross the horizontal angle at 90 and prove the square. By keeping all these angles up and understanding them on your charts, you will know when important time cycles are running out.

If the price of a stock at 60 comes out on the 60th day, week or month, it will meet strong resistance because it has reached the square of price with Time. It is at the same latitude or price and the same longitude or time period. You can always put the square of 90 on a chart--either daily, weekly or monthly--and use the natural angles, but I advise only using this on the weekly and monthly. You can begin this square of 90 from any bottom or top, that is, going up 90 points, or from the natural points, which are 90, 135, 180, but you must not fail to square the extreme low and high price as well as the second and third lower tops and higher bottoms with Time.

RULE FOR KEEPING TIME PERIODS ON CHARTS

It is very important that you keep the time periods on all of your charts, carrying them across from the bottom and top of each important move in order to check up and know that you have your angles or moving-averages at the correct point and to see where major and minor cycles indicate changes in trend.

TIME PERIODS FROM BOTTOMS: When a stock makes bottom one month and then the following month makes a higher bottom and a higher top, or anyway, after it makes a higher bottom and rallies for one month or more, you can start numbering from that bottom. The month that it makes the low be-

longs to the old or downward movement and is the last move down. You count the first month up as one and then number across on the 1/2-inch squares, running them across, adding four each time.

For example: If a stock has made bottom and advanced 50 points, you look down at the bottom of the chart and find that you are on the 25th month- then the angle of 2 x 1, moving up 2 points per month, would cross at 50, while the 45° angle, moving up one point per month, would be at 25, and if the stock broke back under 50 the following month, it would be falling under the angle of 2 x 1 and indicate a further decline. Now, if you had an error on the chart in the timing or numbering across from the bottom, then the moving-average line or angle would not come out correctly.

TIME PERIODS FROM TOPS:

After a stock has advanced and made an extreme high and reacted for a few days, a fewweeks, or a few months, and you start putting on the angles from the top down, you must then begin to number the time periods across from the top. Apply the same rule for the top: The month, week or day that a stock makes extreme high finishes the upward movement and is not to be counted. You can count the number of days, weeks or months moving across after that, allowing the top month to be "0", the next month, week or day over to be "1", adding 4 across on the squares to get the correct position. If this Time Period is carried across on all the charts correctly, then you can always check up and find out if you have made any mistake in bringing down the angles or moving-average lines.

For example: After a stock has declined 75 points, either on a weekly or monthly chart, the angles move down the same, except where the spacing is different. Assuming that the spacing is one point per one-eighth inch, after it has moved down 75 points and all the angles are drawn down from the top, there may be an error in the angle of 2 x 1 because your ruler may have slipped and you may not have placed it correctly after it is down a distance from the top. Now, in order to prove exactly where the angle of 2 x 1 comes out, you determine the number of time periods there are. If 40 days, weeks or months have been required to decline the 75 points, the angle of 2 x 1 moving down 2 points per unit of time, would be down 80 from the top. If you find that this angle does not cross at 80, then you know that you made an error and should correct it.

This is a simple way to always know when the angles or moving-lines are correct because you simply add the movement to the bottom and subtract it from the top. Suppose the price referred to above, when the stock has declined 75 points, was 150, then subtracting 80 from the top at 150, the angle would cross at 70, and the price of the stock down 75 points would be at 75, therefore it would be above the angle of 2 x 1 from the top and in position for a rally if the time cycle indicated it.

POINTS FROM WHICH TO NUMBER TIME PERIODS

The most important point on the monthly high and low chart to carry the time period from is from the extreme low of the life of a stock and also from the date of incorporation or from the date trading in the stock began on the New York Stock Exchange. From the extreme low point the time period should always be carried across on the chart just the same as the important angles should be continued right along for years.

The next important point to number from is a second or third higher bottom,

but you should not consider a bottom established until the market has held up or advanced three to four months, then commence numbering from that bottom if it appears to be important. For example:

U. S. STEEL was incorporated February 25, 1901. Numbering the months across you will note that February, 1931, was 360 months, or 30 years, from the date of incorporation. Then start a new cycle and begin numbering across from "0". This will be working out the second cycle or circle of 360°.

The next important point is the extreme low of 8⅜ made May 14, 1904. On the monthly chart carry the numbers across from this bottom, because it is the lowest bottom and therefore the most important. Note this 30-year cycle or 360 months ended May, 1934.

The next important point to number from and draw the angles from, is the low of 21¼ in October, 1907, the first higher bottom. Then, the next important is the third higher bottom made in February, 1915. Always draw the angles and number the months across from any other important bottoms where campaigns start.

Use this same rule at tops. After top is reached and the trend turns down, then carry the time numbers across from the top, but after any top is crossed or bottom is broken that you are numbering from, then do not count that top or bottom of importance to number from; except to determine a time period on another cycle 3, 5, 7, 10 or 20 years ahead. Tops that stay for a long time without being crossed are always the most important to carry the Time Periods from. The extreme high reached by a stock is always most important until that high is crossed- then the next high point made on a secondary rally, which is always a lower top, is the next most important top to number from. For example:

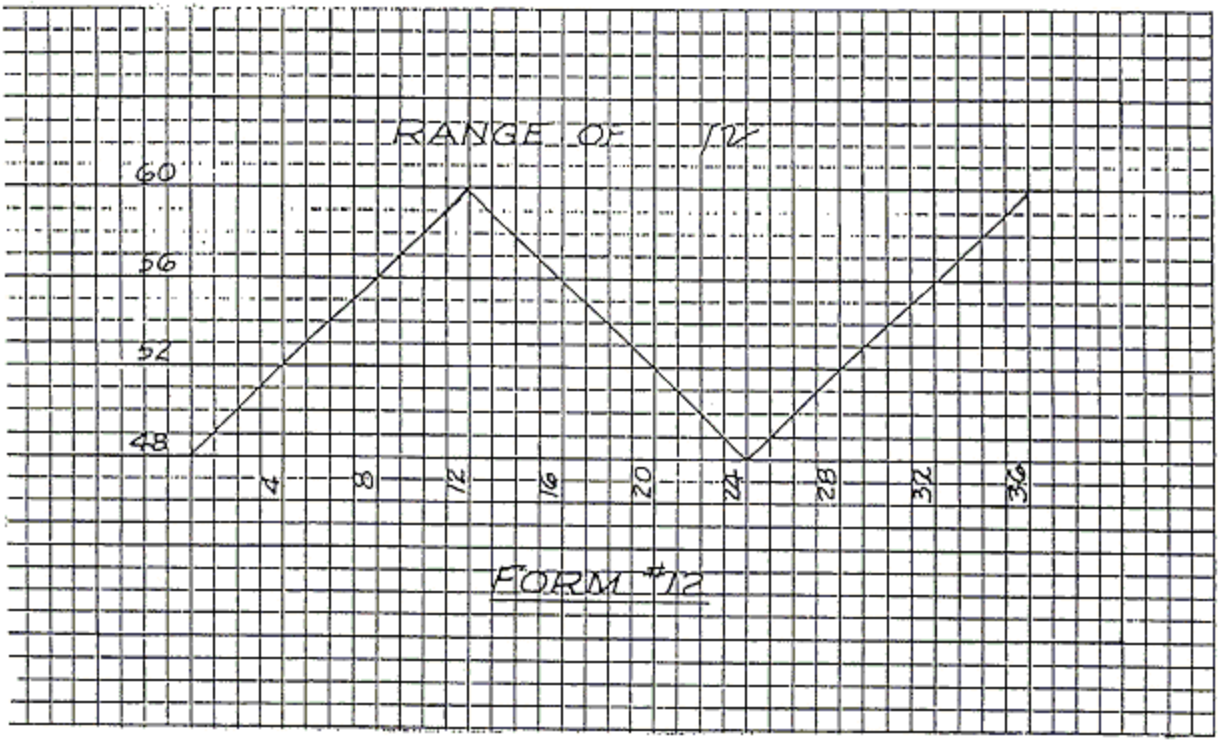
On U. S. Steel you would carry the monthly measurement across first from the high in April 1901- then from the extreme high in October, 1909, and next from the high in May, 1917- then from the final high in September, 1929, being the most important to measure from, and also number from the April, 1930 top.

INDUSTRIAL AVERAGES: The Dow-Jones 30 Industrial Averages reached extreme high on September 3, 1929-- then declined sharply in the panic, reaching low in November 1929-- from this low there was a rally to April, 1930, which was the last high and very important to number from because it was a secondary top, the last rally in a bull market. After final low of the bear market was reached on July 8, 1932, a sharp rally followed to September, 1932, when top was reached-- then a slow decline followed, reaching bottom in late February and early 1933, making this a secondary higher bottom, from which stocks advanced to new high levels. The bottom in 1932 is the most important to number from and the next bottom of March, 1933 is next in importance.

Apply this same rule to weekly and daily bottoms and tops. Discontinue the time periods when any minor top or bottom is exceeded and carry only the main figures on time periods from important tops and bottoms as long as they remain unbroken.

The rule for discontinuing the use of tops and bottoms for Time Periods is: When a bottom or top is exceeded by three points, then discontinue the time period from that bottom or top.

Always note the number of months between extreme high and between extreme low points and note what angle the tops and bottoms come out on.


RANGE OF 12
60
56
52
48
4
8
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16
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24
28
32
36
FORM #12

SQUARING THE PRICE RANGE WITH TIME

This is one of the most important and valuable discoveries that I have ever made, and if you stick strictly to the rule, and always watch a stock when Price is squared by Time, or when Time and Price come together, you will be able to forecast the important changes in trend with greater accuracy.

The squaring of Price with Time means as equal number of points up or down balancing an equal number of time periods--either days, weeks or months. For example: If a stock has advanced 24 points in 24 days, then moving the 45° angle or moving-average-line up at the rate of one point per day, the timing line or time period and the price of the stock are at the same level and the stock is resting on a 45° angle and you should watch for an important change in trend at this point. If a stock is to continue uptrend and remain in a strong position, it must continue to advance and keep above the angle of 45°. If it breaks back under this angle, then it is out of its square on the bear side of the 45° angle and in a weaker position. When you are squaring out Time on a daily chart, look at the weekly high and low chart and monthly high and low chart and see if the stock is in a strong position and has yet to run out the time periods, because on a daily chart it has to react and then recover a position, squaring its price many times, as long as the weekly and monthly point up. Market corrections or reactions are simply the squaring out of minor time periods and later the big declines or big advances are the squaring out of major time periods.

SQUARING THE RANGE: Refer to Form #12, where a range of 12 points is shown from 48 low to 60 high. Now, suppose a stock remains for several weeks or several months, moving up or down, in this range, never getting more than 12 points up from the bottom and not breaking the bottom: We start the 45° angle from the bottom of 48 and move it up to the top of the range to 60, then when we see the stock is holding this range and not going higher, we move the 45° angle back to the bottom; then back to the top of the range again, moving it up or down over this range until the stock breaks out into new low levels or new high levels. You will find that every time the 45° angle reaches the top of this range or the bottom of this range, there is some important change in trend of the stock.

You can also use the angles of 2 x 1 to the right of the 45° angle and the 2 x 1 to the left as they again divide the Time Period into two equal parts and are of some value.

If a stock finally moves out of this range on the up side, then the angles would begin at the new and higher bottom and move up, but from the point where the stock went into new high, or from any important bottom made while it was in the range, especially the last bottom that it made, which would be most important, you should then begin an angle at that bottom and continue on up again; watch when this angle is broken or when Time is squared out again with Price, which would be important for another change in trend, either major or minor.

THREE WAYS TO SQUARE TIME AND PRICE:

We can square the Range, that is, the number of points from extreme low to extreme high, with Time- then square the extreme low point with Time- and square the extreme high point with Time. When the market passes out of these squares and breaks important angles, the trend changes up or down.

1 - The range that a stock makes between extreme high and extreme low can be squared so long as it remains in the same price range. If the range is 25 points, it squares with 25 periods of Time-- days, weeks or months. Continue to use this time period as long as it stays in the same range.

2 - SQUARING TIME WITH BOTTOM OR EXTREME LOW PRICE:
The next important Price to square with Time is the lowest price or bottom of any important decline. For example: If the bottom of a stock is 25, then at the end of 25 days, 25 weeks or 25 months, Time and Price are equal. Then watch for a change in trend as based on its bottom or lowest selling price. As long as a stock continues to hold one bottom and advances, you can always use this time period running across and continuing the time period, noting every time it passes out of the squares. Watch especially when the stock reaches the third square, the fourth square, and again the seventh and ninth squares of its time period. These squares only occur frequently on the daily or weekly charts, as the monthly, in most cases, would move out of a range, up or down, before it squared a bottom as many as 7 or 9 times. However, this does sometimes happen when a stock is in a narrow range for many years.

3 - SQUARING TIME WITH TOP OR EXTREME HIGH PRICE:
The other important point to square Time with is the extreme high price of a stock. The Time period must be carried across from the high of the daily, weekly or monthly, and the square of the top price in Time must be noted and watched for a change in trend. If the top of a stock is 50, then when it has moved over 50 days, 50 weeks or 50 months, it has reached its square in Time and an important change is indicated. This can be determined by the position of the angles from top and bottom. For example:

Dow-Jones Industrial Averages— The high of 386 on September 3, 1929 would require 386 calendar days to equal the Price in Time. This occurred on September 23, 1930. Look at the chart and note how the trend changed and turned down around that time. Then, on October 14, 1931, it run out this period again- and again November 4, 1932, November 25, 1933, December 16, 1934, and January 6, 1935. Look up these dates and you will see that important changes in trend occurred on the Daily Chart when this time period of 386 days balanced the price of 386.

Both major and minor tops and bottoms on all time periods must be watched as they square out right along. Most important of all is the extreme high point on the monthly high and low chart. This may be very high and work out a long time period before it squares the top, in which case you have to divide the price into 8 equal time periods and watch the most important points, like 1/4, 1/3, 1/2, 3/4, but most important of all is when Time equals Price.

When you are watching the position of a stock after it has squared out from a bottom or a top, always look up the time period and the angles from the opposite direction. If the market is nearing a low point, squaring out a top, see how its relation is to the bottom as it might be in the second or third square

period from the bottom, which would be a double indication for a change in trend.

SQUARING WEEKLY TIME PERIODS:

The year contains 52 weeks and the square of this in Time and Price is 52 by 52. Therefore you can make up a square of 52 wide and 52 high; put on all of the angles from "0"; then chart the weekly high and low prices of any stock in this square. For example: If the low price of a stock is 50, then the top of this weekly square would be 52 added to 50, which makes 102 as top of the square. As long as the stock stays above 50 and moves up, it will be working in the weekly square of 52. On the other hand, if the stock makes top and works down, you would make up a weekly square 52 points down from the top and 52 over to get the time period.

You can take the past movement of any stock, put on a square of 52 by 52, and study the movement, noting 13 weeks or one-fourth, 26 weeks or one-half, and 39 weeks or three-fourths points on time, and the changes in trend which take place when the stock reaches these important Resistance Points in Time and Price. You would watch for a change in trend around these time periods.

SQUARING MONTHLY TIME PERIODS:

At the time a stock breaks a 45° angle, if it is selling at 135 on the 135th month, it is breaking a doubly strong Resistance Level-- a strong angle and a natural Resistance Level. This would be Time and Space balancing at Resistance Levels or geometrical angles and would indicate a big decline to follow. - Reverse this rule at the end of a bear campaign.

On a monthly chart twelve months completes a year, therefore the square of 12 is very important for working out time periods on the monthly chart. The square of 12 is 144 and important changes often occur on even 12 months' periods from a bottom or top of a stock. It will help you if you use the Resistance Levels on prices of the even 12's, noting 24, 36, 48, 60. 72, 84, 96, 108, etc. Watch how the stock acts on angles when it reaches these important Resistance points in Price.

PRICE AHEAD OF TIME

Why do stocks often cross the 45° angle on the daily, weekly or monthly chart, then have an advance for a short period of time, decline and rest on the same 45° angle? Because when the stock crosses the 45° angle the first time, it has not run out or overcome the square of Time with Price. Therefore, on the secondary reaction, when it rests on the 45° angle, it is at a time when the stock has reached the square of distance in Time. After that a greater advance follows.

Reverse this rule at the top of a bull market. When a stock breaks under the 45° angle a long distance from the base or bottom, it is most important. Many times a stock will rest on the 45° angle in the early stages of an advance, then later, on a reaction, rest on it again; then have a prolonged advance, react and rest on the 45° again, and then advance to a higher level; then break the 45° angle the next time, which places it in an extremely weak position because it is so far away from the base and so much time has elapsed since the stock made low. Don't forget--It is most important when angles are broken on the monthly and weekly charts.

This accounts for stocks that have a sharp, quick decline from the top and then advance and make a slightly higher top or a series of slightly lower tops, and work over until they overcome the square of the price range at a comparatively high level and break the 45° angle, then a fast decline follows.

STRONGEST ANGLES FOR MEASURING TIME AND PRICE

90° ANGLE: Why is the 90 degree angle the strongest angle of all? Because it is vertical or straight up and straight down.

180° ANGLE: What is the next strongest angle to the 90° angle? The 180° angle because it is square to the 90° angle, being 90° from the 90° angle.

270° ANGLE: What is the next strongest angle to the 180° angle? The 270° angle because it is in opposition to 90, or 180° from the 90° angle, which equals 1/2 of the circle, the strongest point. 270 months equals 22½ years, which is 1/2 of 45.

360° ANGLE: What is the next strongest angle after 270? It is 360°, because it ends the circle and gets back to the beginning point and is opposite 180° or the half-way point, or the angle which equals 1/2 of the circle.

120° AND 240° ANGLES: What angles are next strongest to 90, 180, 270, and 360°? Answer: 120° and 240° angles, because they are 1/3 and 2/3 of the circle. 120° is 90 plus 30, which is 1/3 of 90. 240 is 180 plus 1/3 or 60, which makes these strong angles, especially strong for measurements of time.

45° - 135° - 225° - 315°: What angles are next in strength?
Answer: 45° angle, because it is 1/2 of 90,
135° angle, because it is 90 plus 45,
225° angle, because it is 45 plus 180; and
315° angle, because it is 45 from 270.
The angle of 225° is 180 from 45 and the angle of 315° is 180 from 135.

CARDINAL & FIXED CROSS: The angles of 90, 180, 270, and 360 form the first important cross, known as the Cardinal Cross. The angles of 45, 135, 225, and 315 for the next important cross, which is known as the Fixed Cross. These angles are very important for the measurements of time and space or price, and volume.

22½° - 67½° - 78¾°: Why is the angle of 22½° stronger than 11¼°? Because it is twice as much, being the same reason that a 45° angle is stronger than a 22½° angle. Again, the angle of 67½° is 1½ times 45, therefore quite strong when anything is moving up toward 90°. 78¾° is stronger than 67½°, because it is 7/8 of 90, and therefore one of the strongest points before 90 is reached--important to watch both on time, price, and volume. Many stocks have important moves and make tops or bottoms around the 78th to 80th day, week or month, but don't overlook 84 months or 7 years, a strong time cycle.

DIVISION OF $1: 1/8-POINTS: Why are the angles of 1/8 of a circle most important for time and space measurement? Because we divide $1 into 1/2, 1/4, and

1/8 parts. We use 25 cents or one quarter, 50 cents or half dollar, and long years ago we had 12½ cent pieces. While the most important figures of our basic of money are the four quarters, we do use the 1/8 part or 12½ cents in all calculations. Stock fluctuations are based on 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8 and the whole figure. Therefore, any price measurement as well as time will work out closer to these figures when changed into angles of time than 1/3 or 2/3 points for the simple reason that the fluctuations moving in 1/8 proportion must come out closer to these figures.

Figuring $100, or par, as a basis for stock prices and changing these prices to degrees, 12½ equals 45°, 25 equals 90°, 37½ equals 135°, 50 equals 180°, 62½ equals 225°, 75 equals 270°, 82½ equals 315°, and 100 equals 360°. For example:

When a stock sells at 50 on the 180th day, week or month, it is on the degree of its time angle.

On February 1, 1915, U. S. Steel made a low at 38, which is closest to a price of 37½, which is 3/8 of 100 and equals 135° angle. Steel was 14 years or 168 months old on February 25, 1915, and hit the angle of 135°, which showed that Steel was behind time, but that it was in a strong position, holding at 38 above the 135° angle or the price of 37½.

When Steel reached 200, it equalled 2 circles of 360°. When it advanced to 261¾, it was closest to 62½ in the third 100 or nearest the 225° angle or 5/8 point, which is the strongest angle after it crossed the half-way point at 250 or 180° angle.

W. D. Gann

November, 1935